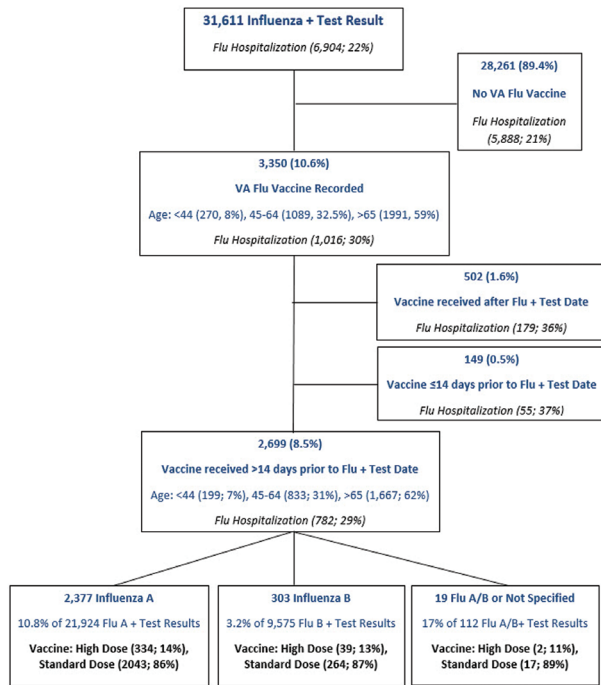


Figure. Review of Laboratory-Confirmed Influenza Cases in VA, 2017-2018 Season.



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2505. A Novel Mobile Phone Application for Remote Research Data Collection is Effective in Monitoring Chronic Sequelae After Acute Viral Infections

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Background. Although much is known about the presentation of acute viral infections such as dengue fever, the long-term sequelae has not been systematically studied. Anecdotal evidence suggests that many viral infections, particularly flaviviral infections, may have long-term sequelae. Prospective longitudinal studies to evaluate such chronic health outcomes, however, require subjects to comply with multiple follow-up clinic visits, making them costly to run and vulnerable to high dropout rates. Using acute dengue and other febrile illnesses (OFI) as test cases, we aimed to explore the utility of a mobile phone application to evaluate the long-term sequelae and self-reported health outcomes in a cohort of patients up to one year post infection.

Methods. We designed a Mobile-phone Application for Information extraction in Dengue (MAIDEN) to study the long-term health outcomes of acute dengue compared with OFI. Demographic and clinical information was collected from the study participants at enrollment. Participants were sent a link via e-mail to download MAIDEN onto their mobile phone. Except for the day 1 visit, participants were not required to attend the study site in-person, but instead used MAIDEN to remotely enter information on symptoms experienced at stipulated intervals.

Results. A total of 44 participants have been recruited to date. 4 participants had acute dengue infection and 40 had OFI. The overall study follow-up compliance rate was 89.2%. 23/44 patients have completed visits up till day 21. Of these 23 patients, 43% reported symptoms at day 7 and 39% at day 21. The table below shows the number of individual symptoms experienced by these participants.

	Dengue (n = 4)		OFI (n = 19)	
	Day 7	Day 21	Day 7	Day 21
Lack of energy	1	1	8	4
Inability to concentrate	1	0	4	3
Memory impairment	1	0	2	3
Headache	1	0	3	3
Myalgia	1	1	1	3
Arthralgia	1	2	1	3
Anorexia	1	0	1	2

Conclusion. Chronic symptoms continue to persist in a significant proportion of patients with acute viral illnesses. Mobile applications such as MAIDEN can serve as useful tools to support remote research data collection, making longitudinal follow-up of such patients feasible.

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2506. Reactivation of Latent Cytomegalovirus Infection Following Major Surgery: Risk Factors and Outcomes

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Background. Reactivation of latent cytomegalovirus infection can occur in nonimmunocompromised individuals during critical illness and may be associated with increased morbidity and mortality. However, few studies have focused on patients undergoing major surgery. Our aim was to explore risk factors for and outcomes following CMV reactivation in nonimmunocompromised post-operative patients.

Methods. We performed a retrospective case-control study of nonimmunocompromised patients with CMV reactivation following major surgery from 2004 to 2016. Cases included patients testing positive for CMV by viral load, viral culture or histopathology. Controls were matched to cases 2:1 by age, sex, type and year of surgery. Groups were compared using conditional logistic regression.

Results. 16 patients with CMV were matched to 32 controls. Median age was 65 (range 34–84) and 50% were male. The most common surgeries were abdominal (44%) and cardiac (25%). Median time from surgery to CMV diagnosis was 32 days (range 17–93). Patients had a range of clinical symptoms including fever (94%), hepatitis (75%), bone marrow suppression (56%) and gastrointestinal symptoms (56%). All except one were treated with antiviral therapy. Despite having similar baseline Charlson comorbidity scores, cases were more likely to return to surgery within 3 months (odds ratio, OR 6.31; 95% CI, 1.29–30.74), require renal replacement therapy (OR 18.54, 2.36–145.6), total parenteral nutrition (OR 33.0, 6.60–262.37) and corticosteroids (OR 18.78, 4.5–103.9). Length of stay was increased (median 51 vs. 8 days, $P = 0.005$), coinfections were more common (OR 15.10, 1.89–120.8), and in-hospital mortality was significantly higher (38% vs. 0%, $P < 0.01$).

Conclusion. Reactivation of CMV occurs in nonimmunocompromised patients post-operatively and is associated with poor outcomes including other infections and mortality. Potential risk factors include prolonged length of stay, development of surgical complications, and prolonged use of corticosteroids. It is not clear from our study if CMV reactivation is a surrogate marker of severe illness and postoperative complications, or if CMV reactivation plays a causative role in the development of these adverse outcomes.

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2507. Active Norovirus Surveillance in Children Under 5 Years With Diarrhea Following Rotavirus Vaccine Introduction in Argentina

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Background. Acute diarrhea is one of the main causes of infant mortality. Argentina introduced massive rotavirus vaccination in 2015. This introduction in several countries, has changed the distribution of enteropathogens and has been described a decrease in the rotavirus prevalence at the expense of an increase in norovirus (NoV) activity. NoV is reported to be emerging as one of the main agents producing acute diarrhea in the community. In Argentina, there are few experiences estimating its prevalence in cases of acute diarrhea in children. The aim of this study was to analyze the role of NoV in outpatient children <5 years of age with acute diarrhea and their epidemiological pattern.

Methods. Prospective, cross-sectional study of outpatients <5 years attended for acute diarrhea in Children's Hospital "R. Gutiérrez" between June 2017 and March 2018. Active epidemiological surveillance was performed with a specific case reporting form. Stool samples were collected and tested for NoV (RT-qPCR), clinical and epidemiological data were recorded.

Results. A total of 136 patients were included and 125 stools were processed. The median of age was 20 months (IQR: 12–31) and 59% were male; the most common symptom was fever and vomits in 70% and 55%, respectively. A 55% had watery diarrhea and